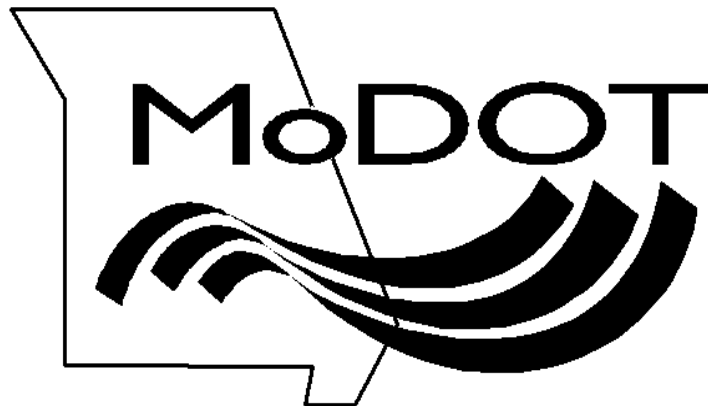


**TECHNICIAN
CERTIFICATION
PROGRAM
POLICY**



MoDOT Technician Certification Program Policy

ADMINISTRATION

Policies and Procedures for Administering MoDOT's Technician Certification Program (TCP)

Introduction

The purpose of the TCP is to ensure the quality of materials incorporated into MoDOT projects by supporting proper and uniform procedures among individuals responsible for the sampling and acceptance testing (including IAS and FAST) of certain non-manufactured materials used in transportation construction projects. These materials are aggregates, soil, concrete and asphalt.

All technicians who perform, or are required by the FHWA to witness, such sampling and testing shall be deemed as qualified by virtue of successfully completing the requirements of the TCP for that specific technical area. They will be identified by a certification card issued by the certifying authority. The card will provide photo identification and note the expiration date of each certification level. Any individual who has not been qualified is not eligible to perform these functions on MoDOT projects on the National Highway System.

Certifications are designated as Level 1 Technician, Level 2 Soils, Level 2 Aggregate, Level 2 Concrete, Level 2 Bituminous, Aggregate Specific Gravity, Low Slump, and Profilograph.

The certification process includes classroom instruction followed by written examinations and performance demonstrations. No exceptions will be made by virtue of previous experience, education or certifications.

Training Review Board

The State Project Operations Engineer chairs this board of eight members. Remaining members include the Materials Qualification Engineer and six division and/or district representatives. Replacement members will be at the discretion of the Director of Operations. The board is responsible for oversight of the program, including matters involving appeals and de-certification.

Responsibilities

Materials Qualification Engineer (MQE)

- Reports to the State Project Operations Engineer.
- Administers the TCP, handles everyday operations and inquires on administrative issues.
- Qualifies instructors.
- Coordinates development of training manuals, course content and certification examinations.
- Sets up training courses, including scheduling times and locations, and provides training aids.
- Assigns instructors and monitors the classes for effectiveness and consistency.
- Keeps registry of approved trainers.
- Grades written examinations.
- Issues certification cards.
- Maintains database on certification testing results and certification status.
- Maintains security procedures for examination materials and program records.
- Reviews and makes recommendations for updating the program as necessary.
- Serves on the Training Review Board.
- Develops and maintains a system of regular field review checks.
- Works with the FHWA and other states on reciprocity issues.

District Coordinator

- Assigned by the District Engineer, preferably Operations Engineer with Construction or Materials responsibility.
- Oversees the program in their individual District.
- Acts as a liaison between the District and the MQE/Training Review Board.
- Tracks the District's training needs.
- Helps select trainers to be provided by the District.
- Assists in the investigation of decertification charges.

Trainers

- Administer course contents as outlined in material provided for training.
- Assure written tests are administered without bias or suspect of collaboration.
- Conduct training without personal bias.
- Administer performance checks consistently and within training guidelines.
- Develop and modify training course material including manuals, presentations and tests.
- Provide training environment open to learning.

Evaluators

- Administer performance checks consistently and within training guidelines.

Trainer Qualifications

Trainers will be selected by the District Coordinators based on their experience, adult education skills and desire to participate in the program. The MQE will make the final approval of the Trainers. It is preferable that these individuals be a Salary Grade 12 or higher and NICET Certification Level III or higher. Trainers will attend the train-the-trainer course and yearly trainer review courses for certification. It is preferred that they not be in the chain of command of applicants they are training or testing for certification. Trainers will have completed all levels of the certification program with exception to the Level 2 Bituminous.

Evaluator Qualifications

The District Coordinators or Trainers will select the evaluators. This will be based on their experience in the test methods they will conduct performance examinations for. They will be approved by the MQE and must be certified in the test methods they are assigned to conduct performance examinations for.

Trainees Qualifications

The District Coordinators, in cooperation with other immediate supervisors, will determine who is eligible and qualified to attempt a particular certification. Basic prerequisites for any training will be adequate math and reading comprehension skills. Recommendations should be made based on the technician's related experience, education, demonstrated ability and potential. These should be especially considered when choosing applicants for advanced certification levels. The District's staffing needs may be considered as well.

The application process shall be handled through the District Coordinator. The applicant shall submit the form provided for this purpose prior to the certification training, Figure 1.

Recent training in radiation safety is required for training involving the operation of nuclear gauges.

Cancellation

Once an application has been received and the trainee is confirmed as enrolled in a class it is the trainees responsibility to notify the MQE of cancellation or re-scheduling needs. Trainees who are charged for training will be invoiced for the training once application is accepted. If cancellation notification is not received by the MQE 10 calendar days prior to the first day of training, the trainee will not be eligible for credit of the payment made for the training. Any cancellations within the 10 calendar day period will result in the trainee being responsible for payment of the course charge.

Certification Classroom Training

Classroom instruction is grouped in technical areas of a length adequate to provide training in the test methods required for certification. The grouping is as shown in Figure 2. It will be a combination of lecture, hands-on training and self-study. Class size should be held to about twelve to fifteen students with at least two instructors assigned for each course. Prior to beginning training the Trainers will verify students identity and if required have student sign Rights and Responsibility statement.

The training material will be distributed by the MQE and will be reviewed yearly for content. Post-course evaluations from the participants will be used and are a valuable tool in judging the effectiveness of the training and providing suggestions for improvement.

Qualification for Level 2 Bituminous will be satisfied by successful completion of the SuperPave QC/QA Short Course.

Certification Testing

Certification requires passing a written and a performance examination, which will be given at the end of the training modules to determine if the applicant possesses the knowledge and skills necessary to satisfy the certification requirements. Written exams will be issued by the MQE. Questions will be randomly chosen from a pool maintained by the MQE. Testing will be open book with a 2-hour time limit for all written exams, except for the Level 2 Bituminous exam, which will have a 3-hour time limit. The applicant shall not retain copies of the exam. If requested by the examinee, the test questions will be read to the examinee by a trainer. The MQE, his/her staff, or UMR Personnel will score examinations. Scores required for passing the written exam are:

- For Level 1, Level 2 Soils, Aggregate and Concrete, the passing grade shall be 85%.
- For Level 2 Bituminous HMA or Agg, the passing grade shall be 80%.
- For Profilograph, the passing grade shall be 85%.

Pass/Fail test results will be reported to the Trainee and the District Coordinator and/or Trainee supervisor. Re-testing, if requested, must be completed within 60 days of the course date. Re-testing will utilize a different exam as provided by the MQE and be taken at a time and place determined by the MQE. Test scores will only be viewed by the MQE or Review Board.

For the performance examination, the trainer or evaluator must be completely satisfied that the applicant's technique and knowledge of the test method meets the program's established performance criteria. This may be accomplished by an actual demonstration or by verbally explaining the procedure within a reasonable time limit. The MQE will develop a checklist of the major steps for each test method. The Trainer or evaluator to assist in determining the applicant's proficiency and understanding of the test procedure will use that checklist. Scoring of the performance exam will be either pass or fail. If the performance exam is failed, the Trainer or evaluator will explain the errors and the applicant will have the opportunity to repeat the test the same day. Trainers and Evaluators will report the results on the checklist and forward these results to the MQE.

Trainees and their District Coordinator will be notified as soon as possible whether successful or unsuccessful in satisfying the certification requirements. If successful, a certification card will be issued by the MQE.

Two failures, in either the written or performance exam, will require a repetition of the class and another attempt to pass the certification testing. Repeated failures would demonstrate the employee's inability to perform the essential duties of the job and may result in reassignment, demotion or termination at the discretion of the District.

Certification Identification

Certification is valid for 3 years. The certification number will be the Technician's Social Security Number (SSN). A technician can request an alternate number be used in lieu of their SSN. The identification cards will have the technician's photograph, certification number, name, levels of certification, and expiration date indicated on the front. The back will list the test methods associated with each level of certification and color-coded to the levels listed on the front to indicate expiration dates of test methods.

Certification for levels 1, 2 Soils, 2 Aggregate, 2 Concrete, 2 Bituminous will be shown on one card. Profilograph, Low Slump, and Aggregate Specific Gravity certification will be shown on a separate card. Updates to certifications will be by issuance of a new certification card to indicate a new expiration date at by the MQE.

If a replacement card is needed the request form shown in Figure 3 will be required prior to re-issuance of a card.

Apprentice Certification

There is a need for interim qualification of new hires, summer students, and seasonal workers. This will be accomplished by instruction by a certified trainer followed by a written examination and demonstration of proficiency in one or more specific test methods. Passing for the written exam is 70% for each Test Method. A card identifying the individual's apprentice status will be issued by the MQE with a yellow background. Temporary apprentice certification is valid only until the following March 1. Trainees who fail to achieve full registration can be granted Apprentice Status for those individual test methods they have completed, provided that they meet the apprenticeship criteria.

The registration for the Apprentice Program, Figure 4, indicates the specific core tests. Trainees who are charged for Apprenticeship training will be charged \$25 per test method.

Audits

To assure continuing accuracy and consistency of sampling and testing procedures and the proper condition of the testing equipment, the MQE shall develop a procedure for review checks. Individuals who observe technicians performing acceptance work can complete these reviews. These individuals could include but are not limited to; Operation Liaison Engineers, Technical Support Engineers, IAS Inspectors, or Operations Engineers. Their observations will be recorded on the form shown in figure 5 and forwarded to the MQE for recording.

The Independent Assurance Sampling (IAS) Program will also provide auditing data.

Re-certification

Each certification is valid for a three-year period. In order to reaffirm and update the technician's qualifications, taking a review class, passing a written examination and performance exam in the applicable test methods, will renew certifications. The testing process and criteria for recertification shall be the same as for the original certification except retesting will not be allowed. If testing failure occurs, then completion of the full certification course is required.

The technician is allowed a 90-day period beyond the expiration date of their certification to attend a re-certification course. After this 90-day period they will be required to attend an initial certification course to become certified in the lapsed certification. Their certification is not extended during this 90-day period.

De-certification

An individual will be considered decertified if he/she fails to renew their certification after three years or fails the recertification testing. In addition, decertification will be considered by the Training Review Board for fraud, abuse, willful negligence or demonstrated incompetence as identified by the inspector's supervisor or certified technician, verified by a second certified technician and recommended by the District Coordinator. Charges must be presented in writing by the District to the Review Board. If validated by the Review Board the minimum action will be for the first offense a written reprimand to the individual from the Board. The second violation may result in a thirty-day suspension of all certifications the individual currently holds. A third offense will result in permanent withdrawal of all certifications and a recommendation by the Board to the District and the Human Resources Division regarding removal from inspection responsibilities and assignment to other work for MoDOT employees. If the department determines that other productive work is not available, the MoDOT employee will be suspended without pay. After any decertification proceeding, the MQE must notify the individual and their supervisor of the outcome in writing within ten working days.

Any de-certification action taken, other than permanent revocation of certifications, will be removed from the technicians record three (3) years after the date of the de-certification action.

Appeals

Individuals may appeal decisions involving the TCP. Such appeals may be made in writing or by requesting in writing an informal hearing with the Training Review Board through the MQE. The written appeal or request for the informal hearing must be made within 30 days of the decerification determination made by the review board. If a MoDOT individual remains unsatisfied by the Board's decision, he/she may pursue further action through the department's normal grievance procedure.

Reciprocity

In accordance with FHWA guidelines, other state DOT's may recognize an individual's certification acquired through MoDOT's TCP. Likewise, MoDOT may accept another state's certification as evidence of qualification to the extent that it includes the particular test methods required for MoDOT certification. If necessary, successful completion of additional training may be necessary before certification is granted. The MQE will make any determinations on reciprocity.

Records

Testing and performance checklist information will be kept for the most recent 2 certification cycles.

Eligibility for Training

Individuals will be considered eligible for this training and certification if they meet one of the following requirements:

1. Employed by MoDOT.
2. Employed by a Highway Contractor who does business with MoDOT.
3. Employed by a Consultant who does business with MoDOT.
4. Employed by FHWA.

Consideration will be given to any other individual based on the availability of openings in courses scheduled to meet the training needs of the above listed individuals. Those who do not meet the above criteria will be placed on a waiting list and allowed to attend courses, which are not filled by eligible individuals.